

adjacent, but different microlenses may have adjacent sides. Two adjacent sides of two respective adjacent microlenses are parallel to each other and form a "boundary," as shown in Fig. 2A, between the two adjacent microlenses.

On the other hand, each single microlens in Fig. 2A has a substantially square shape with four sides. Because of the characteristics of a square, two adjacent sides within a single microlens are substantially perpendicular to each other.

In view of the above, while two adjacent sides, each from two respective adjacent microlenses, are parallel to each other, two adjacent sides within a single microlens are perpendicular to each other.

The April 22, 2005 Amendment amended the specification and the claims for clarification regarding two adjacent sides within a single microlens. However, the Office Action and the Advisory Action made the objections and rejections based on the characteristics of two adjacent sides from two respective adjacent, but different microlenses. Thus, the Office Action and the Advisory Action were not responsive to the April 22, 2005 Amendment.

II. The Office Action objects to the April 22, 2005 Amendment, asserting that the April 22, 2005 Amendment adds new matter to the specification. This objection is respectfully traversed.

The April 22, 2005 Amendment amended the specification to describe a feature illustrated in the originally filed Fig. 2A. In particular, in Fig. 2A, adjacent sides within a single microlens 120a are substantially perpendicular to each other (see the originally filed Fig. 2A). Furthermore, as described in paragraph [0048], the microlenses 120a are arrayed vertically and horizontally, before the array is rotated by 45 degrees. For the microlenses 120 shown in Fig. 2, adjacent sides within one microlens need to be substantially perpendicular to each other for the plurality of microlenses 120a to be arrayed vertically and horizontally,

because each microlens 120a is substantially square in shape. Therefore, the amendments to the specification merely describes what is disclosed in Fig. 2A and paragraph [0048] as originally filed. Thus, no new matter was added.

The Office Action appears to argue that adjacent sides of two adjacent microlenses are parallel to each other, as illustrated in Fig. 2A. As discussed above, the Office Action is confusing the two distinct concepts outlined above. Thus, while this argument is correct, it is irrelevant to the amendments to the specification in the April 22, 2005 Amendment, because the amendments are directed to two adjacent sides of a same microlens. Therefore, this Office Action argument is incorrect when applied to the April 22, 2005 Amendment.

For at least the above reasons, withdrawal of the objection to the April 22, 2005 Amendment is respectfully requested.

III. The Office Action rejects claim 7 under 35 U.S.C. §112, first paragraph, asserting that the subject matter recited in claim 7 is not supported in the specification. This rejection is respectfully traversed.

As discussed above in connection with the objection to the April 22, 2005 Amendment, the originally filed Fig. 2A clearly illustrates that "adjacent sides within a microlens being perpendicular to each other." Thus, the subject matter recited in claim 7 is supported in the specification at Fig. 2A. Accordingly, withdrawal of the rejection of claim 7 under 35 U.S.C. §112, first paragraph, is respectfully requested.

IV. The Office Action rejects claims 1, 2 and 4-7 under 35 U.S.C. §103(a) over U.S. Patent No. 6,335,828 to Hashimoto et al. in view of U.S. Patent No. 6,297,540 to Assadi et al.; and rejects claim 3 under 35 U.S.C. §103(a) over Hashimoto in view of Assadi and further in view of U.S. Patent Publication No. 2004/0070845 to Karasawa et al. These rejections are respectfully traversed.

The Office Action acknowledges that Hashimoto does not disclose or suggest microlenses of a microlens array portion being arrayed in a first direction and a second direction, with adjacent microlenses having common side, the first direction being rotated by 45° with respect to the horizontal direction, the second direction being perpendicular to the first direction, as recited in claim 1; but asserts that Assadi discloses this feature. However, Assadi does not disclose this feature, because Assadi does not disclose or suggest microlenses of a microlens array portion being arrayed in a first direction and a second direction, the second direction being perpendicular to the first direction, as recited in claim 1.

Assadi discloses an arrangement along two directions. See Fig. 1. However, these two directions are not perpendicular to each other. Thus, the elements 12 in Fig. 1 of Assadi are not arranged in two directions that are substantially perpendicular to each other.

The Office Action asserts that if two mutually perpendicular axes are rotated by 45°, these two axes remain mutually perpendicular. While this argument is correct, it is irrelevant to the subject matter recited in claim 1. In particular, claim 1 recites two directions in which the microlenses are arranged. The argument presented in the Office Action, on the other hand, only describes two axes along which element 12 in Fig. 1 of Assadi are not arranged.

For at least the above reasons, Assadi does not supply the subject matter lacking in Hashimoto.

Furthermore, Karasawa does not disclose or suggest microlenses of a microlens array portion that is arrayed in a first direction and a second direction, the second direction being perpendicular to the first direction, as recited in claim 1. Therefore, Karasawa does not supply the subject matter lacking in Hashimoto.

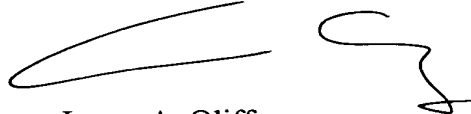
In view of the above, Hashimoto, Assadi and Karasawa, either individually or in combination, do not disclose or suggest the subject matter recited in claim 1.

Additionally, claims 2-7 are patentable over the applied references at least in view of the patentability of claim 1, from which they depend, as well as for additional features they recite. For example, the applied references do not disclose or suggest a plurality of microlenses each having a substantially four-sided shape, adjacent sides within a microlens being perpendicular to each other, as recited in claim 7.

V. In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:GXL/axl

Attachments:

Petition for Extension of Time  
Request for Continued Examination

Date: November 14, 2005

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